

PROCEDURE 32 - Motor Vehicle Safety

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Synopsis

The purpose of this procedure is to provide guidelines related to potential hazards associated with on- and off-road motor vehicle operation. This procedure applies to all National Weather Service (NWS) facilities and employees that operate motor vehicles in the performance of their job duties.

Initial Implementation Requirements:

- **Analyze Site Operations versus Requirements of the Procedure**
- **Designate Person to Administer the Motor Vehicle Safety Procedure Requirements**
- **Provide Local Training of Site Personnel (If Applicable)**
 - Personnel Awareness Training. (32.5.2, 32.5.4)
- **Inventory Material/Equipment (Procure as required)**
 - Safety Warning Devices (e.g., Reflective Triangles, etc.). (32.4.2b, 32.3.2c)
 - Emergency Equipment. (e.g., Flashlight, Jumper Cables, etc.) (32.4.2b, 32.3.3c)
 - Communication Devices. (32.4.2b, 32.3.1e, 32.3.4k)
 - Personal Floatation Devices (PFD). (32.4.2b, 32.3.4e)(if applicable)
 - Personal Protective Equipment. (32.4.2b, 32.3.4j)

Recurring and Annual Task Requirements:

- **Perform Inspection/Assessment/Testing**
 - Conduct monthly inspections of all vehicles (32.3.1c & Attachment A)
 - Conduct Inspections of all vehicles prior to the long distance trips and driving off the road (32.3.1c & Attachment A)
 - Conduct pre-trip Inspections of Snowmobiles and Snow Cats (32.3.4, Attachment B)
 - Conduct routine Inspections of vehicles during winter conditions (32.3.3)
 - Conduct routine Inspections of vehicles during hot weather conditions (32.3.5)
- **Review/Update Documentation/Information required for Site**
 - Monthly Vehicle Safety Inspection checklists (Attachment A)
 - Snowmobile and Snow Cats pre-trip checklists (Attachment B)
 - "Snow Travel Plans". (32.3.6g)
- **Provide Refresher Training of Site Personnel (If Applicable)**
 - Personnel Awareness Training. (32.5.2, 32.5.4)
- **Inspect/Replace/Recalibrate/Maintain Material/Equipment**
 - Safety Warning Devices (e.g., Reflective Triangles, etc.). (32.4.2b, 32.3.2c)
 - Emergency Equipment. (e.g., Flashlight, Jumper Cables, etc.) (32.4.2b, 32.3.3c)
 - Communication Devices. (32.4.2b, 32.3.1e, 32.3.4k)
 - Personal Floatation Devices (PFD). (32.4.2b, 32.3.4e)(if applicable)
 - Personal Protective Equipment. (32.4.2b, 32.3.4j)

Motor Vehicle Safety Checklist

Requirements	Reference	YES	NO	N/A	Comments
Is initial and annual review of this procedure conducted and documented?	32.4.2				
Have all individuals affected by this procedure read, understood and followed the procedure?	32.5.4				
Are all drivers familiar with general safe driving guidelines?	Attachment C				
Do all drivers have a valid drivers license?	32.3.1a				
Are all vehicles inspected monthly and prior to making a long distance trip?	32.3.1c, Attachment A				
Do employees follow motor vehicle accident reporting procedures?	32.3.2d				
Are drivers familiar with guidelines when driving at night and in rainy, foggy conditions?	Attachment C				
Are drivers familiar with guidelines when driving in winter conditions?	32.3.3a-c				
Are FAA safety driving rules followed when driving on airport grounds?	32.3.8				
Are drivers familiar with guidelines when driving in hot weather conditions?	32.3.5				

Requirements	Reference	YES	NO	N/A	Comments
Are all vehicles equipped with the necessary emergency equipment?	32.3.3c. 1-7				
Do all Drivers of Snowmobiles and Snow Cats comply with the requirements of this procedure?	32.3.4a-k				
Are Snow Travel Plans filed with the Station Manager prior to initiating a trip?	32.3.4g				
Do all drivers comply with procedure when crossing Railroads?	32.3.6				
Do all drivers check the vehicle and inform the supervisor regarding the travel plans prior to driving off the road?	32.3.7, d Attachment A				
Do all drivers and follow safety guidelines while driving off the road?	32.3.7				
Are all drivers aware of safety precautions relevant to car jacking and tailgating?	32.3.11a,b				
Do all personnel follow the guidelines concerning the use of Cellular Phones while driving?	32.3.12				

32 MOTOR VEHICLE SAFETY

32.1 Purpose and Scope

As part of its goal to provide a safe and healthful workplace, the National Weather Service (NWS) is promulgating this procedure related to potential hazards associated with on- and off-road motor vehicle operation. This procedure applies to all NWS facilities and to all employees who operate motor vehicles in the performance of their job duties.

32.2 Definitions

Field Office. A Field Office may include the following: Weather Forecast Office (WFO), River Forecast Center (RFC), Weather Service Office (WSO), and a Data Collection Office (DCO).

Hydroplaning. The result of tires moving quickly across a wet surface, causing the tire(s) to be lifted off the road; most or all traction is lost.

Motor Vehicle. Any self-propelled mechanically or electrically powered vehicle designed to be operated principally on the roadway for the transportation of property or passengers.

Personal Floatation Device (PFD). Life preservers, buoyant vests, special- purpose water-safety devices, buoyant cushions, ring buoys and work vests, each of which shall be United States Coast Guard approved.

Operating Unit. For the purpose of this procedure, Operating Unit includes the National Centers for Environmental Prediction (NCEP), National Data Buoy Center (NDBC), NWS Training Center (NWSTC), National Reconditioning Center (NRC), Radar Operations (ROC), or the Sterling Research & Development Center (SR&DC).

Station Manager. For the purpose of this procedure, the Station Manager shall be either the NWS Regional Director; Directors of Centers under NCEP (Aviation Weather Center, NP6; Storm Prediction Center, NP7; and Tropical Prediction Center, NP8); Directors of the NDBC, NWSTC, and Chiefs of NRC, ROC and SR&DC facilities; or Meteorologist in Charge (MIC), Hydrologist in Charge (HIC), or Official in Charge (OIC).

Stopping Distance. Is the sum of reaction distance plus braking distance. At 55 MPH, reaction distance is 60 feet. At 55 MPH, the stopping distance is 225 feet for passenger cars and 335 feet for tractor trailers.

Driver. A NWS employee who holds a valid driver's license issued by a state or territory of the United States of America.

Snowmobile or Snow Cat. An off-road vehicle used to access remote areas in the winter.

32.3 Procedure

32.3.1 General Rules. All drivers shall:

- a. Have a valid drivers license.
- b. Obey the laws and regulations of the state/territory in which the vehicle is operated.
- c. Inspect vehicles (at least monthly) in accordance with operator's manual and manufacturer's recommendations. It is also recommended that vehicles be inspected prior to making a long trip or driving off-road (see Attachment A).
- d. Have seat belts fastened when driving and ensure that passengers also fasten their seat belts.
- e. Carry a two-way radio or cellular phone, if available.
- f. Be prepared with the following emergency equipment in case the vehicle breaks down:
 - (1) Flashlight
 - (2) Jumper cables
 - (3) Flares or reflective triangles

32.3.2 Motor Vehicle Accidents. When an accident occurs, all drivers shall:

- a. Get vehicle to the side of the road, if possible.
- b. Put on flashers.
- c. Set out reflective triangles or road flares to warn other drivers.
- d. Notify authorities as soon as possible if an accident occurs and follow reporting procedures outlined in Procedure 18, "Accident/Illness Reporting and Recording."

32.3.3 Driving in Winter Conditions. The following guidelines are recommended for safe driving in winter conditions:

- a. Ensure that the vehicle is in proper operating condition prior to each trip:
 - (1) Cooling system is full.
 - (2) Tires are inflated and have sufficient tread to handle slippery conditions.
 - (3) Heater and defrosters work.

- (4) Wiper blades are in good condition, the windshield washer works and washer fluid reservoir is full.
- (5) The battery is fully charged.
- b. Follow safe-driving tips:
 - (1) Do not let ice and snow accumulate on the windshield, windows and mirrors.
 - (2) Check tire chains for broken hooks, worn or broken cross links, and bent or broken side chains. Carry the right number of chains and extra cross links.
 - (3) Start slowly in slippery conditions.
 - (4) Avoid making any sudden changes in direction or speed.
 - (5) Keep the headlights on.
- c. Be prepared with the following emergency equipment in case the vehicle breaks down or becomes stuck in snow or ice:
 - (1) Flashlight
 - (2) Jumper cables
 - (3) Ice scraper
 - (4) Shovel
 - (5) Flares or reflective triangles
 - (6) Blanket
 - (7) Sand or other material to provide friction

32.3.4 Snowmobile and Snow Cat safety. All drivers of snowmobiles and Snow Cat vehicles shall:

- a. Conduct the pre-trip inspection in accordance with operator's manual and manufacturer's specifications (See Attachment B).
- b. Avoid ice covered bodies of water unless it is known that the ice is safe for vehicular travel.
- c. Wear warm clothing with a windproof outer layer.

- d. Wear Personal Floatation Device (PFD) when crossing bodies of water covered with ice.
- e. If the ice breaks, all drivers and passengers should:
 - (1) Keep calm.
 - (2) Extend arms forward onto the unbroken ice.
 - (3) Kick until a level position with the ice is attained.
 - (4) Work forward onto the unbroken ice.
 - (5) Keep sliding on the ice away from the break.
 - (6) Do not stand up.
 - (7) Seek medical assistance as quickly as possible.
- f. Reduce speed of Snowmobile or Snow Cat when near other vehicles, people, trees, animals and other objects;
- g. File a Snow Travel Plan with the Station Manager indicating the following:
 - (1) Planned route.
 - (2) Time of departure.
 - (3) Names of passengers.
 - (4) Expected time of arrival.
- h. Never enter an avalanche area.
- i. Wear a safety helmet and goggles that offer protection from the wind and the sun.
- j. Use a two-way radio or cellular phone.

32.3.5 Driving in Hot Weather. When driving in hot weather conditions all drivers should:

- a. Check the tire mounting and air pressure.
- b. Check to determine if air conditioning system is in operating condition.
- c. Periodically check the water temperature or coolant temperature gauge.

32.3.6 Railroad Crossings. Railroad crossings, especially unprotected crossings in remote areas, can pose a hazard to drivers. At railroad crossings all drivers shall:

- a. Slow the vehicle to allow time to look in both directions of the crossing for an oncoming train.

- b. Listen for the sound of a train whistle. This may require turning down or turning off the vehicle's radio and/or interior fan.
- c. Proceed through the crossing with caution.

32.3.7 Driving off the Road. The following guidelines are for drivers when driving off-road:

- a. Inspect vehicles in accordance with operator's manual and manufacturer's specifications prior to the trip (see attachment A).
- b. If carrying a load, be sure that the load is properly balanced. Heavy items should be placed forward of the rear axle for better traction. Avoid using roof racks as this could lead to vehicle instability in steep terrain.
- c. If available, acquire a map of the area in which you will be traveling.
- d. Alert the supervisor about the travel plans including time of departure, estimated time of arrival and planned route.
- e. When conditions appear difficult, stop and park the vehicle. Get out and survey the area on foot to help in determining the safest route.
- f. When negotiating slopes, keep the use of the clutch (if applicable) and brake to a minimum. This reduces chances of sliding and losing control of the vehicle.
- g. When descending steep slopes, use first gear. Braking should be provided by the engine. Apply the accelerator carefully so that you do not cause the wheels to spin.
- h. Avoid any existing wheel ruts and obstacles which may not be cleared by the chassis. Be aware of the need to maintain ground clearance.
- i. If the ground is soft, you may reduce the tire pressure to a minimum and clear clogged tire treads to improve traction.
- j. As a rule, do not take chances in dangerous terrain. Choose another route or turn back.

32.3.8 Driving on Airport Grounds. While driving on airport grounds, the FAA Guide entitled "The Airport Ground Vehicle Operation" must be followed. (e.g., at airports with a traffic control tower, a driver of the vehicle must get controller's permission before going onto a runway or taxiway).

32.3.9 Emergency Flashers, Horns, and Signaling. To ensure proper communication of actions to other drivers or pedestrians, follow the guidelines below:

- a. Signal before making a turn.
- b. Signal before changing lanes.
- c. Use emergency flashers when parked at the side of the road.

- d. Use headlights when driving during daylight and night-time hours.
- e. Use horn to warn other drivers of the dangerous situation.

32.3.10 Leaving the Road. When leaving the road all drivers should follow these guidelines where possible:

- a. Avoid braking. If possible, avoid using the brakes until speed has dropped to about 20 mph.
- b. Keep one set of wheels on pavement if possible;
- c. Stay on the shoulder.
- d. Signal and check your mirrors before pulling back onto the road.

32.3.11 Personal Safety.

- a. The following precautions are recommended to reduce the risk of *carjacking*:
 - (1) Do not stop to help a disabled motorist. A safer alternative is to contact a service station or the police.
 - (2) Keep your doors locked and windows rolled up (at least part-way, if it is hot and you don't have air conditioning), no matter how short the distance or how safe the neighborhood that you are traveling in may appear.
 - (3) When stopped at a red light, leave enough room between you and the car in front so that you won't be blocked in and can get away if necessary.
 - (4) Be suspicious of anyone approaching the car with brochures/papers, etc., asking for change or directions. Be ready to leave, even if it means running a red light or a stop sign.
 - (5) While driving, if struck from behind or in any suspicious way, stay in your vehicle with the doors locked and windows closed until the police arrive. Activate your vehicle's emergency flashers. Be aware of "road rage" and its implications. Make every attempt to be a courteous driver and do not stop or leave the vehicle to confront an angry driver.
 - (6) If you think you are being followed, drive immediately to an area with good lighting and people. If possible, drive to the nearest police station.
 - (7) If you have one, use your cellular phone to call for help.
- b. To help ensure personal safety when being *tailgated* follow these guidelines:

- (1) Avoid quick changes.
- (2) Never speed up.
- (3) Avoid tricks such as braking quickly to “signal” the tailgater to back off.
- (4) When possible, give appropriate signal and pull off the road at a safe area to allow the tailgating driver to pass.

32.3.12 Cellular Phone Use. Cellular phones can be a lifesaver in case of automobile accidents, vehicle breakdown or when personal safety is in danger. However, unsafe operation of a cellular phone in a non-emergency situation may become a cause of an accident. To ensure safety while operating the phone, practice the following guidelines:

- a. Avoid using the phone while driving, unless an emergency call must be made. Do not use the phone when driving under hazardous conditions.
- b. Do not take notes or look up numbers while driving. If necessary, pull off to a safe area and make the necessary notes or check needed numbers.
- c. Do not engage in stressful or distracting conversations while driving. Let the other party know you are driving and, if necessary, suspend the conversation until a later time.
- d. Become familiar with all the features and operations of the phone. Read the instruction manual and learn the use of valuable features such as one-touch dialing, auto re-dial and memory dial. Work to memorize the keypad so that you can dial without taking your eyes off of the road.
- e. Keep your phone within easy reach. Keep it where you can reach it without taking your eyes off the road.
- f. When available, use hands-free devices. A number of hands-free phone accessories are readily available.
- g. Dial 911 if assistance is needed in an emergency.

32.4 Quality Control

32.4.1 Regional or Operating Unit Environmental/Safety Coordinators

- a. Shall perform an annual assessment of the regional headquarters facilities or operating unit to monitor and promote compliance with the requirements of this procedure.

- b. Shall perform assessments or designate personnel to perform assessments of all field offices to monitor and promote compliance with the requirements of this procedure every two years.

32.4.2 Station Manager

- a. Shall review, or delegate review, of this procedure on an annual basis to ensure that the facility is complying with its requirements. Confirmation of this review shall be forwarded to the Regional or Operating Unit Environmental/Safety Coordinator.
- b. Shall ensure that initial and periodic inventory of safety warning devices, emergency equipment, PPE and other safety equipment is accomplished and adequate stock is maintained.

32.4.3 NWS Headquarters (NWSH)

- a. The NWS Safety Office shall perform an annual assessment of the NWSH facilities to ensure that the facilities are in compliance with this procedure.
- b. The NWSH Safety Office shall periodically perform an assessment of the regional headquarters and field offices to ensure compliance with this procedure. The frequency of these regional and field office assessments shall be determined by the NWSH Safety Office.
- c. Requests for clarification concerning this procedure shall be directed to the NWSH Safety Office.

32.5 Responsibilities

32.5.1 Regional or Operating Unit Environmental/Safety Coordinators*

Shall monitor and coordinate to promote compliance with the requirements of this procedure for the regional headquarters, and field offices or operating units.

32.5.2 Station Manager*

- a. Shall have oversight over the implementation of this procedure, and ensure that the requirements of this procedure are followed by individuals at the NWS facility.
- b. Shall ensure that initial and refresher awareness training are provided, as required.

32.5.3 Safety or Environmental/Safety Focal Point*

Shall ensure that any responsibilities delegated to them by the Station Manager are implemented in accordance with the requirements of this procedure.

32.5.4 Employees

- a. Individual employees affected by this procedure are required to read, understand and comply with the requirements of this procedure.
- b. Report unsafe or unhealthful conditions and practices to their supervisor or safety focal point.

NOTE: * - Reference NWS PD 50-11 for complete list of responsibilities
<http://www.nws.noaa.gov/directives/050/pd05011a.pdf>

32.6 References

Incorporated References. The following list of references is incorporated as a whole or in part into this procedure. These references can provide additional explanation or guidance for the implementation of this procedure.

- 32.6.1 NWS Occupational Safety and Health Procedure 18, “Accident/Illness Reporting and Recording.”
- 32.6.2 FAA Guide, The Airport Ground Vehicle Operation.

32.7 Attachments

Attachment A: NWS Vehicle Inspection Checklist

Attachment B: NWS Snowmobile/Snow Cat Pre-Trip Checklist

Attachment C: Safe Driving Guidelines

ATTACHMENT A

NWS Vehicle Inspection Checklist

Directions: Complete this checklist by checking the “OK” or “Deficient” column for each item. All NWS vehicles must be inspected at least monthly. It is recommended that NWS vehicles also be inspected prior to any long trip or trip off the road. (**Note: Prior to inspection, set the parking brake and release the hood).**

Item	OK	Deficient
Outside of Vehicle		
No mysterious puddles or leaks underneath vehicle		
No unreported body damage		
Windshields, windows and mirrors are clean and undamaged		
Windshield wipes are in good condition		
All four tires are properly inflated		
Spare tire is available and properly inflated		
Engine Compartment		
Oil is within one (1) quart of full		
Coolant level in expansion bottle is “full” or “max”*		
Horn, Lights, and Emergency Flashers		
Horn is functioning properly		
Lights and emergency flashers are working properly		
Belts and Batteries		
Belts and hoses are in good condition (proper adjustment to be checked routinely by servicing facility)		
No excessive corrosion around battery terminals		
Emergency Equipment		
First aid kit is fully stocked and ready for use		
Flares, road reflectors, or roadside triangles are available for use		
Winter or summer emergency equipment/supplies		
Optional Equipment		
Tire chains (if needed for winter driving)		
Cellular telephone (for emergency use)		
Fire extinguisher is properly secured and ready for quick use		

* Recommend to have a specific gravity test done before winter and summer season driving.

Name of Inspector

Date

Vehicle Odometer Reading

ATTACHMENT B

NWS Snowmobile/Snow Cat Pre-Trip Checklist

Directions: Complete the below checklist by answering the “OK” or “Deficient” column before starting of trip. All must be OK before trip may begin.

Item	OK	Deficient
2 sets of screw drivers		
Rags and Litter Bags		
Adjustable wrench		
Black electrical tape		
Split and open end wrenches		
Starter cord		
Vise grips		
Mechanics wire		
Extra key		
First aid kit		
Pocket knife		
Trail map		
Compass		
Waterproof matches		
Candy bars or other high energy food		
Flashlight		
Flares		
50 feet nylon rope		
Emergency blanket		
Emergency shelter		
Fuel		
Oil		
Cell phone/CB		

 Name of Inspector

 Date

ATTACHMENT C

Safe Driving Guidelines

1. General

- a. Look ahead of the vehicle and be aware of the following:
 - i. Vehicles entering the highway or into your lane
 - ii. Brake lights from slowing vehicles
 - iii. Road conditions
 - iv. Traffic signs and signals
 - v. Vehicles on either side and in back of the vehicle
- b. Apply the parking brake when leaving vehicle
- c. Never attempt to pass a vehicle indicating a left turn
- d. Slow down and take precautions when:
 - (1) Driving through a work and/or school zones
 - (2) Doing drop offs
 - (3) Entering off-ramps and on-ramps.
 - (4) Approaching pedestrians.
 - (5) Driving through a wildlife area.
- e. Schedule trips during daylight hours, if possible; and
- f. Do not take medications that may cause drowsiness before a trip.

2. Driving at Night.

- a. Avoid looking directly at bright lights when driving.
- b. Get off the road and rest if tired and sleepy.
- c. Reduce speed when lighting is poor or confusing.
- d. Use headlight high beams when not in view of other vehicles (unless foggy conditions are present). Drivers shall dim lights within 500 feet of an oncoming vehicle and when following another vehicle within 500 feet.

3. Driving in the Rain.

- a. Reduce normal speed of driving.
- b. Test brakes periodically.

- c. Allow more distance than normal between your vehicle and the vehicle ahead.
- d. If hydroplaning occurs, do not apply brakes and avoid steering in any direction but straight ahead.
- e. Do not drive through standing water unless it can be verified that it is shallow enough to cross safely.

4. Driving in Foggy Conditions.

- a. Use low beam lights.
- b. Use wipers to clear condensation from the windshield.
- c. Use the right side of the road for guidance.